

XIV. *A list of the Heteromerous Coleoptera collected by Mr. J. J. Walker, R.N., F.L.S., in the region of the Straits of Gibraltar, with descriptions of four new species.* By GEORGE C. CHAMPION, F.Z.S.

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THE following list of the Heteromerous Coleoptera from the Straits of Gibraltar is intended as a continuation of the paper contributed by Mr. Walker himself on the Macro-Lepidoptera of this region (*Trans. Ent. Soc. Lond.*, 1890, pp. 361, *et seq.*). Mr. Walker's captures include many species not recorded by Rosenhauer in his important work, '*Die Thiere Andalusiens*' (1856); Mr. Walker, however, was unable to collect so far inland as the Sierra Nevada, where very many of Rosenhauer's insects were obtained. The collection made by him at Gibraltar (including Algeciras, the cork-woods, &c., a radius of at least ten miles inland) is a very extensive one, and must be by far the most complete ever got together at this place. A certain number of species were obtained at Malaga, and these are also included. On the opposite coast, at Ceuta, Djebel Mousa (Apes' Hill), Esmir, Tetuan, Benzús Bay, Tangier, Peregil Island, &c., important but less extensive collections were made, more especially in the vicinity of Tetuan; his opportunities of visiting Tangier were, however, few and far between, so that he did not obtain examples of many well-known Tangier species. The Gibraltar collection cannot contain fewer than 1200 species of Coleoptera; examples of about 950 of these were exhibited by myself on one occasion at a meeting of this Society. With the Maroccan insects, and the few collected at Malaga, the total number of species of Coleoptera obtained probably exceeds 1500.

From the point of geographical distribution the collection is particularly interesting, as showing which species are confined to the European and which to the

African side of the Straits, and those that are common to both. As it would necessarily take a considerable time to determine such a large number of species, a list of the "Heteromera" is offered as a first instalment, in the hope that lists of the species of the other groups of the Coleoptera may be subsequently supplied, either by myself or others.

Mr. Walker obtained altogether examples of 191 species of this group; of these 64 were met with on both sides of the Straits, 89 on the European side only, 38 on the African side only. Four or five species are additions to the European list, and four are described as new.

In addition to Rosenhauer's important work on the Andalusian Coleoptera, two other valuable papers have been published on the Coleoptera of this region:—(1). "Eine entomologische Wintercampagne in Spanien," by G. Dieck (Berl. ent. Zeitschr., 1870, pp. 145—184); an English translation of this interesting article is given in the 'Entomologist' for 1888, pp. 38—43, 75—81). This contains an account of the Coleoptera observed at various places on the European side (Algeciras, &c.), and also at Tangier, but a general summary of the species is not given. (2). "Entomologische Reise nach dem südlichen Spanien," by Lucas von Heyden (Berl. ent. Zeitschr., 1870, Beih. pp. 1—175).

Rosenhauer enumerated 205 species of Heteromera from Andalusia, but of these about thirty are inserted on the authority of Waltl, examples not having been obtained by him; some of Waltl's names (and Rosenhauer's also) are merely synonyms. This is a considerably larger number than Mr. Walker's (153), but it must be remembered that Rosenhauer collected in the Sierra Nevada, and also at Cadiz, Granada, Malaga, &c., as well as in the vicinity of Algeciras and Gibraltar; nevertheless, the following list adds about 56 species to Rosenhauer's list.

Of the species occurring on the Moroccan coast, and which do not cross the Straits, perhaps *Lagria viridipennis*, Fabr., is the most striking, it being abundant at Tetuan. *Helops tuberculipennis*, Luc., and *Oncomera marmorata*, Er., are not included in von Heyden, Reitter, and Weise's European Catalogue (1891). Of the four species described as new, two are from the

vicinity of Gibraltar, and two from the Moroccan coast. From a study of the following list it will be seen that by far the larger number of the species of the Heteromera are common to S. Europe and Morocco; but, as there is no published catalogue of the Moroccan Coleoptera, a precise analysis cannot be given.

I am indebted to Herr E. Reitter and M. Allard for their assistance in determining some of the doubtful forms, and also for furnishing me with examples of various species for comparison.

Marked * new to Rosenhauer's Andalusian list.

TENEBRIONIDÆ.

Zophosis minuta, Fabr. (*suborbicularis*, Sol.).

Gibraltar; sandy places, common. Also at Tetuan and Tangier.

Erodius tibialis, Linn. (*europæus*, Sol.).

Tangier; common. Not met with in the vicinity of Gibraltar, but recorded by Rosenhauer from San Lucar and Cadiz.

Erodius carinatus, Sol. (*latus*, Sol.).

Gibraltar; sandy places, plentiful. Also at Tetuan and Tangier.

Erodius rugosus, Kr. (*puncticollis*, Rosenh.).

Gibraltar; Campo Common, in summer; not common. Not observed on the Moroccan side of the Straits.

Pachychila Salzmanni, Sol.*

Gibraltar; in tufts, under stones, &c., common. Also at Ceuta, Tetuan, and Tangier. Recorded by Crotch from Gibraltar [Petites Nouv. Ent., i., p. 49 (1870)], and by Dieck from Algeciras, Gibraltar, and Tangier.

Pachychila nitens, Sol.*

Gibraltar; a few examples.

Pachychila Dejeani, Bess. (*subovata*, Bess.).

Tetuan; one example, perhaps belonging to this species.

Pachychila Steveni, Sol.

Tetuan; one specimen. Both this species and the preceding are upon the European list.

Pachychila Germari, Sol. (*bifida*, Rosenh.).

Gibraltar; sandy places, neutral ground, &c.; common. Also at Tetuan.

Tentyria elongata, Walzl (*sinuatocollis*, Rosenh.).

Gibraltar; sandy places, abundant. Also at Tetuan.

Tentyria gaditana, Rosenh.

Gibraltar; cork-woods, rare. September, 1887.

Tentyria platyceps, Stev. (*Goudoti*, Sol., *modesta*, Rosenh.).

Gibraltar; in tufts and under stones, Campo and San Roque. The var. *modesta* was found by Rosenhauer in the Sierra Nevada.

Tentyria laevis, Sol.

Malaga; not uncommon.

Adelostoma sulcatum, Dup.

Gibraltar; in tufts and under stones; common. Specimens collected at Tetuan, Marocco, have the median carina of the head extending almost to the base; these are, no doubt, referable to *A. cristatum*, Eschsch., which, according to Haag, is merely a variety of *A. sulcatum*, Dup.

Stenosis hispanica, Sol.

Gibraltar; more local than the following, but abundant. Also at Djebel Mousa (Apes' Hill), and Tetuan, Marocco.

Stenosis hesperica, Sol.

Gibraltar; at roots of herbage, abundant. Also at Tetuan and Tangier.

Dichillus læviusculus, Kr.

Tangier; one example.†

Dichillus subcostatus, Sol.

Gibraltar; under bark, in the cork-woods.

Dichillus andalusicus, Rosenh.

Gibraltar; chiefly under stones, very common; Campo, &c. Neither this nor the preceding species were met with on the Maroccan side of the Straits, where they appear to be replaced by closely allied forms.

Elenophorus collaris, Linn.

Malaga; one example. Benzús Bay, Marocco; one example.

Morica planata, Fabr.

Gibraltar; North Front; locally very abundant. Also at Tangier and Tetuan.

Akis acuminata, Fabr.

Gibraltar; Rock, North Front, neutral ground, Campo, &c.; abundant.

Scaurus uncinus, Forst. (*gigas*, Waltl, *hespericus*, Sol.).

Gibraltar; neutral ground, &c.; not rare. Also at Tetuan.

Scaurus tristis, Oliv.*

Gibraltar. Also at Tetuan.

Scaurus sticticus, Gemm. (*punctatus*, Herbst).

Gibraltar; Rock, neutral ground, San Roque, &c.; common. Also at Benzús Bay and Tangier.

Blaps lusitanica, Herbst.

Benzús Bay and Tangier, Marocco. Numerous examples of both sexes of a large *Blaps* resembling *B. gages* seem to belong to this species, from European specimens of which the males differ in being a little less convex and more elongate. Three of these specimens (two males

† This species is not included in the last edition of the European Catalogue (1891); I, however, possess a specimen of it from Cartagena.

and one female) have the entire upper surface very opaque; they were collected at Benzús Bay with others which have the upper surface slightly shining, and I have very little doubt they are merely a variety of the same species. The males of both forms are without the characteristic tuft of fulvous hairs between the first and second ventral segments; the only other large species mentioned by Allard in his monograph (Ann. Soc. Ent. Fr., 1880—1882) as possessing this character being *B. caudigera*, Gemm., which, however, is a larger and broader insect. The caudal appendages are formed exactly as in *B. lusitanica*, long in the male, shorter in the female, and scarcely dehiscent at the apex. The posterior femora are denticulate and the tibiæ of the same pair of legs are slightly sinuous in the male. M. Allard has examined one of the opaque females, and states that the species is unknown to him.

Blaps gages, Linn.

Tangier; one male example.

Blaps armeniaca, Fald. (*plana*, Sol.).

Gibraltar; not uncommon. To judge from Allard's description and figure (Ann. Soc. Ent. Fr., 1881, p. 171, fig. 48), and from comparison with numerous specimens so named by him, the commonest *Blaps* at Gibraltar is referable to *B. armeniaca*, Fald., and not to *B. gages*, Linn.

Blaps hispanica, Sol.

Gibraltar; North Front; not uncommon. All the specimens are comparatively small in size.

Blaps brachyura, Küst.

Gibraltar; North Front. Female examples only obtained, two of which have been thus determined by M. Allard.

Blaps similis, Latr. (*fatidica*, St.).

Gibraltar; one example.

Asida holosericea, Germ. (*Ramburi*, Sol.).

Malaga.

Asida luctuosa, Rosenh.

Gibraltar; occasionally found on paths in the spring.

Asida Kraatzi, All.

Of this species two specimens were captured on Peregil Island, on the Maroccan coast. Allard's examples came from Tetuan.

Asida inquinata, Rosenh.

Gibraltar ; found in tufts and under stones ; not rare. Also at Tetuan and Tangier.

Asida Goudoti, Sol., var. *ventricosa*, Sol.

Gibraltar ; one dead specimen in the second pine-wood.

Asida barbara, All.

Benzús Bay, Marocco ; one example.

Asida cincta, Rosenh.

Malaga ; not rare.

Asida rugosa, Fabr. (*Fabricii*, All.).

Tangier ; not uncommon.

Pimelia variolosa, Sol.

Gibraltar ; on the Rock, &c. ; not rare.

Pimelia maura, Sol.

Gibraltar ; chiefly beyond San Roque ; not rare. Also at Ceuta, Tetuan, and Tangier.

Pimelia ruida, Sol.

Malaga. Also occurs at Almeria.

Pimelia fornicata, Herbst.

Gibraltar ; North Front, neutral ground, &c. ; common. Also at Tangier.

Pimelia Boyeri, Sol.

Tangier ; two specimens.

Pimelia scabrosa, Sol.

Tetuan, Marocco ; a few examples. Not met with at Gibraltar, but it is recorded from Spain.

Sepidium bidentatum, Sol.

Gibraltar; cork-woods and on the Rock, in spring; not common. Malaga; abundant.

Sepidium barbarum, Sol.

Tangier; one specimen. Recorded from Europe.

Crypticus gibbulus, Quens.

Gibraltar; North Front, neutral ground, &c.; common. Also at Tangier and Benzús Bay, Marocco.

Crypticus pruinosis, Duf.

Gibraltar; sandy beaches, at roots of plants; common. Not met with on the Maroccan coast.

Oochrotus unicolor, Luc.

Gibraltar; in nests of *Atta barbara*; abundant. Also at Tangier.

Dendarus pectoralis, Muls.*

Gibraltar; three examples. Also at Tetuan, Benzús Bay, and Tangier, Marocco.

Dendarus castilianus, Pioch.*

Gibraltar; not uncommon. Chiefly found under bark. These specimens differ from *D. pectoralis* in having the elytral interstices more or less convex, and the sides of the thorax less abruptly constricted behind, thus agreeing with Piochard's description. Rosenhauer does not mention either of these species, the only *Dendarus* (*Pandarus*) recorded by him being *D. Aubei*, Muls., an insect not met with by Mr. Walker.

Dendarus insidiosus, Muls.*

Gibraltar; not uncommon. Also at Tangier.

Phylax littoralis, Muls.*

Gibraltar; one specimen only.

Litoborus planicollis, Waltl.

Gibraltar; under stones, &c.; not rare.

Litoborus Moreleti, Luc.*

Tetuan, Marocco. A single specimen from Gibraltar seems to belong to the same species.

Micrositus furvus, Muls.*

Malaga; common.

Micrositus obesus, Waltl (*baticus*, Muls.).

Gibraltar; in the cork-woods; rare. Also at Malaga.

Isocerus ferrugineus, Fabr.

Gibraltar; at roots of herbage on the beach; common. Also at Tetuan and Tangier.

Heliopathes cribratostriatus, Muls.

Tangier; a few examples. Not met with on the European side of the Straits; the species, however, has been recorded from Spain.

Heliopathes interstitialis, Muls.

Djebel Mousa (Apes' Hill) and Tetuan, Marocco; not uncommon.

Heliopathes emarginatus, Fabr. (*variolosus*, Luc.).*

Gibraltar; not uncommon. These examples seem to agree better with Mulsant's description of *H. emarginatus* than with his definition of any other species of the genus; the determination, however, is doubtful. Rosenhauer and Dieck both record *H. ibericus*, Muls., from Algeciras; Mr. Walker's examples, however, do not fit Mulsant's description of that species, nor do they agree with a specimen of *H. ibericus* forwarded to me for comparison by Herr E. Reitter.

Heliopathes (Olocrates) planiusculus, Muls.

Gibraltar; rare. Also, commonly, at Peregil Island and Tangier, Marocco.

Heliopathes (Olocrates) latipennis, n. sp.

Moderately elongate, rather convex, dull black; the head very densely and rugosely punctured, the eyes completely divided by the genæ; the prothorax broader than long, transversely convex, semi-circularly emarginate in front, finely margined at the sides and base, moderately rounded at the sides anteriorly, gradually narrowed posteriorly, and subparallel at the extreme base, the hind angles prominent, rectangular or a little projecting, the entire surface very densely and uniformly punctured, and with traces of a smooth median line; the elytra distinctly wider than the prothorax, convex, moderately long, widest about the middle, parallel towards the base, with the humeri projecting in front and excavate within for the reception of the hind angles of the prothorax, finely striate, the striæ with rather coarse not very closely placed punctures, the interstices thickly and minutely punctured, feebly convex; legs stout, the anterior tibiæ triangularly dilated, but not very broadly so, the anterior tarsi simple. Length 9—10, breadth 4—4½, millim.

Tetuan, Marocco. Three examples, their sex not ascertained.

Closely allied to *H. planiusculus*, Muls., but duller, less elongate, and more convex; the head and thorax less finely punctured; the thorax a little broader at the base, and not so strongly constricted at the sides behind; the elytra very distinctly broader than the thorax, more coarsely punctate-striate, the interstices very feebly but distinctly convex; the anterior tibiæ less widened towards the apex. In the prominent humeri this species approaches the genus *Phylax*, but it is evidently better placed in the *Olocrates* section of *Heliopathes*; it agrees, in fact, in most of its characters, with *H. planiusculus*, which is one of those species with the anterior tarsi undilated in the male. The form of the humeri separates it from *Micrositus*, and that of the anterior tibiæ from *Litoborus*.

Pseudolamus pusillus, Baudi (*seriatoporus*, Fairm.).*

Gibraltar; in tufts of grass, &c., Campo Common; rare. Also commonly at Tangier, and rarely at Tetuan.

Scleron armatum, Walth.

Gibraltar; in tufts of grass, &c., Campo; abundant.
Also at Tetuan.

Cnemeplatia atropos, Costa.*

Gibraltar; chiefly on walls, late summer; common.
Also at Tangier.

Opatrum porcatum, Fabr.

Djebel Mousa (Apes' Hill), Tetuan, and Tangier; not uncommon. Recorded from the Balearic Islands and Sicily.

Opatrum bæticum, Rosenh.

Malaga; common.

Opatrum (Gonocephalum) rusticum, Oliv.

Gibraltar; under stones, North Front, &c.; common.
Also at Tetuan. Possibly this is the *O. lugens* of Dieck.

Opatrum (Gonocephalum) pusillum, Fabr.

Gibraltar; in tufts of grass, &c., Campo and other places; not rare. Also at Tangier.

Opatroides thoracicus, Rosenh.

Gibraltar; under stones, not rare. Also at Tangier.

Leichenum pulchellum, Küst.

Gibraltar; sandy places, not common. Also at Tetuan.

Anemia granulata, Lap., var. *sardoa*, Géné.*

Gibraltar; on the North Front road, common, in summer.

Ammophthorus rufus, Luc. (*rugosus*, Rosenh.).

Gibraltar; sandy places, at roots of herbage; common. Also at Tetuan.

Trachyscelis aphodioides, Latr.*

Gibraltar; eastern beach, not common. Also at Tetuan.

Phaleria oblonga, Küst.

Gibraltar ; at the roots of herbage and under carcases on the beach ; common. Also at Tetuan.

Phaleria cadaverina, Fabr.

Tangier ; not met with at Gibraltar. Recorded by Rosenhauer from Malaga.

Alphitophagus 4-pustulatus, Steph.

Gibraltar ; one specimen found beneath decaying fig-bark on the Rock.

Pentaphyllus testaceus, Hellw.*

Gibraltar ; in dead locust tree, Alameda ; abundant.

Tribolium ferrugineum, Fabr.

Gibraltar ; occasionally on walls.

Gnathocerus cornutus, Fabr.

Gibraltar ; on walls.

Palorus melinus, Herbst (*depressus*, Fabr.).*

Gibraltar ; plentifully in a dead oak, at the edge of the second pine-wood.

Corticeus fasciatus, Fabr.*

Gibraltar ; plentifully in a dead oak, at the edge of the second pine-wood.

Alphitobius diaperinus, Panz.

Gibraltar.

Cataphronetis crenata, Germ.

Tetuan ; not uncommon. Not met with at Gibraltar. Recorded by Rosenhauer from Cadiz.

Cossyphus Hoffmannseggi, Herbst.

Gibraltar ; very plentifully under stones near Campo. Also at Peregil Island, Djebel Mousa (Apes' Hill), Tetuan, and Tangier.

Cossyphus Dejeani, de Brême.

Gibraltar ; under same conditions as the preceding ; plentiful. Also at Tetuan and Tangier.

Cossyphus incostatus, de Brême.

Algeciras ; under stones, clay soil ; common. Also at Djebel Mousa (Apes' Hill), Marocco. Recorded by Dieck from Tangier.

Cossyphus tuberculatus, de Brême.

Recorded by Rosenhauer from Algeciras. Only met with on the Moroccan side, at Tangier.

Cossyphus pygmæus, de Brême.*

Algeciras ; under stones, common, March 16th, 1889. Also plentifully at Tangier.

Tenebrio obscurus, Fabr.

Gibraltar ; picked up in the town.

Calcar elongatum, Herbst.

Gibraltar ; under stones, &c., Campo ; abundant. Also freely at Tetuan and Tangier.

Calcar humerale, n. sp.

Smaller and less elongate than *C. elongatum* ; the upper surface more opaque ; the eyes still smaller, transverse, distant from the base of the head ; the head and prothorax a little more finely and shallowly punctured ; the prothorax with the sides parallel in their median third, rounded in front, and obliquely converging just before the base, the hind angles well defined ; the elytra relatively much shorter than in *C. elongatum*, not or barely exceeding twice the length of the prothorax, the striæ deeper and more finely, shallowly, and more closely crenate-punctate, the interstices moderately convex on the disc, strongly so towards the sides, and sparsely and minutely punctured, the lateral carina sharper and extending right up to the base (visible from above), the humeri considerably prolonged in front and subtuberculiform, the sides almost parallel at the base ; the legs shorter than in *C. elongatum* ; the anterior tibiæ bent inwards at the apex (the intermediate pair

also, but less distinctly so), the posterior tibiæ very feebly dilated on the inner side within about the middle, and all the femora a little more swollen, in the male; the other characters very much as in *C. elongatum*. Length $7\frac{1}{4}$ — $7\frac{1}{2}$ millim. (♂ ♀).

One female and two male examples, all from Tangier. Abundantly distinct from *C. elongatum* in numerous particulars, more especially by the very prominent sub-tuberculiform humeri, the relatively much shorter elytra (in *C. elongatum* they are considerably more than twice the length of the thorax), these being almost parallel at the base, the distinct hind angles to the thorax, the more convex elytral interstices, and the deeper and more finely punctured striæ. The very small, narrow, transverse eyes, which are distant from the base of the head, separate *C. humerale* at once from all the species of the section *Centorus*, Muls., of which two, *C. Lucasi*, Muls., and *C. Raffrayi*, Fairm., have been described from Algeria. *C. elongatum* is a common species at Tangier, and the two were apparently collected together. *Centorus procerus*, Muls., is recorded by Rosenhauer from Algeciras.

Boromorphus tagenioides, Luc.

Gibraltar; in dry tufts of grass and under stones; abundant. Also at Tangier and Tetuan.

Dilamus rufipes, Luc.*

Gibraltar; beyond San Roque, a few under stones, &c., March, 1888. Also at Tangier; common.

Misolampus Goudoti, Guér.

Djebel Mousa (Apes' Hill) and Ceuta, Marocco; under loose bark. Not met with on the opposite side of the Straits, but recorded from Europe.

Helops coriaceus, Küst.

Gibraltar; under loose cork-bark, cork-woods; sparingly.

Helops (Nalassus) pallidus, Curt.*

Gibraltar; chiefly on the east beach at roots of herbage; not rare. Recorded by Dieck from Gibraltar and Tangier.

Helops (Nalassus) nanus, Küst. (*parvulus*, Luc.).

Gibraltar ; under stones, in tufts of grass, flood refuse, &c. ; occasional. Also at Tetuan.

Helops (Nalassus) parvulus, Ramb.

Gibraltar ; one mutilated example, perhaps belonging to this species.

Helops (Nalassus) tingitanus, All.

Tetuan ; three examples.

Helops (Stenomax) calpensis, n. sp.*

Oblong-ovate, moderately convex, blackish brown, shining, the elytra with a very faint brassy lustre, the labrum and oral organs fusco-testaceous. Head deeply transversely depressed in front, very closely and finely punctured ; antennæ fusco-ferruginous, rather slender, in the male reaching to about the basal fourth of the elytra, in the female a little shorter ; prothorax strongly transverse, transversely convex, scarcely broader at the base than at the apex, the base and apex feebly bisinuate, the sides finely margined, rounded and dilated before the middle (less distinctly so in the female), narrowed and slightly sinuate behind, the hind angles subrectangular, the basal foveæ feebly indicated, the surface closely, finely, and almost equally punctured (the punctuation a little more diffuse than that of the head, and not becoming denser towards the sides) ; scutellum with a few minute punctures ; elytra a little flattened on the disc, not more than two and a half times the length of the prothorax, and scarcely wider than it at the base, widest at the middle, a little rounded at the sides, obliquely narrowed behind, deeply and finely punctate-striate, the striæ becoming finer towards the apex, the interstices feebly convex, minutely and rather thickly punctured ; beneath pitchy-brown, finely and thickly punctured ; legs pitchy-brown, the tarsi testaceous ; the anterior tarsi only a very little stouter in the male than in the female ; body apterous. Length $7\frac{1}{2}$, breadth 3, millim. (♂ ♀).

Two examples only, both from the vicinity of Gibraltar. Somewhat resembling *H. (Omaleis) ophonoides*, Luc. ; but with the elytra relatively much shorter (in *H. ophonoides* they are fully three times as long as the thorax), less parallel, very little wider than the thorax at

the base, and the striæ more finely punctured; the thorax more convex transversely, more rounded at the sides anteriorly (in *H. ophonoides* the sides are slightly sinuate-emarginate before the apex), and with the anterior angles more declivous and less prominent; also much smaller in size. The male differs from the female in having the anterior tarsi slightly stouter, the thorax rather broader and more rounded at the sides before the middle, the elytra a little narrower, and the antennæ longer. M. Allard, to whom an example has been submitted for examination, states that the species is unknown to him. *H. ophonoides* is recorded by Dieck from Algeciras.

Helops (Catomus) Walkeri, n. sp.*

Elongate, narrow, convex, brownish-piceous or obscure reddish-brown, with an æneous lustre, slightly shining, the oral organs, antennæ, and legs reddish-brown, the upper surface thickly clothed with long erect yellowish-cinereous pubescence. Head very deeply transversely depressed in front, coarsely and densely punctured; antennæ thin at the base, but thickening outwardly, extending to beyond the middle of the elytra in the male, considerably shorter in the female; prothorax convex, distinctly wider than the head in both sexes, very little broader than long in the male, more transverse in the female, rounded at the sides anteriorly, obliquely narrowed behind, the hind angles subrectangular, the base truncate, the entire surface densely and coarsely punctured, the punctures oblong in shape, and here and there obliquely or longitudinally confluent (more distinctly so in some specimens than in others); scutellum short, more than twice as broad as long, smooth, or with a few fine scattered punctures; elytra distinctly wider than the prothorax at the base, long and convex, widest at the middle, slightly rounded at the sides and narrowed at the shoulders, very sharply margined from the base to the apex, truncate at the base, the humeri distinctly projecting in front, the basal margin somewhat swollen, finely and deeply striate throughout, the striæ with fine oblong closely placed punctures, the interstices feebly convex or almost flat, coarsely punctured, the punctures on each interstice forming irregular double rows in the larger specimens, and a single row in the smaller ones; beneath paler in colour, coarsely and closely punctured; anterior tarsi with the three basal joints very broadly and equally dilated in the male. Length 4—7½, breadth 1½—2¾, millim. (♂ ♀).

Gibraltar; not uncommon, in tufts of grass, &c. Specimens of this species submitted by me to M. Allard have been named by him as *H. gossypiatius*, Reiche, an insect only known as yet from Algeria. These Gibraltar specimens, however, by no means agree with either Reiche's original description, or with the subsequent one given by Allard (Mittheil. schweiz. ent. Ges., v., p. 191). Both authors state that "*H. gossypiatius* may be easily distinguished by its almost cylindrical form, its prothorax scarcely broader than the head, and its hairy clothing." In the last-mentioned character *H. Walkeri* agrees with *H. gossypiatius*; but its general shape is less cylindrical, and the prothorax in both sexes is very distinctly wider than the head. In various other particulars it also differs from the description: the elytral interstices are coarsely (not finely) punctured, the elytra themselves are distinctly broader at the base than the prothorax, the scutellum is almost smooth, &c. *H. Walkeri* is nearly allied to *H. macellus*, Kr., an insect inhabiting the same locality; but is easily separable from it by the long pubescence, the very much more finely punctured elytral striæ, the flatter and coarsely punctured interstices, &c. Like many other species of the genus, it varies enormously in size. The male has the three basal joints of the anterior tarsi very broadly and equally dilated, these joints being as wide as the tibiæ at the apex. It differs in various particulars from *H. piligerus*, Kr., *H. villosipennis*, Luc., *H. pubescens*, Küst., &c.

Helops (Catomus) macellus, Kr.*

Gibraltar; under stones, in tufts of grass, flood refuse, &c.; occasional. Recorded by Dieck from Algeciras.

Helops (Catomus) angustatus, Luc.

Tetuan and Tangier; several examples, varying enormously in size. Not yet known from Europe.

Helops (Diastixus) carbo, Küst.*

Gibraltar; five examples. The determination is made upon M. Allard's authority. These specimens seem

to agree better with the description of the Algerian *H. puncticollis*, Luc., than with that of *H. carbo*, Küst.; from an Algerian example of the former before me they merely differ in having the thorax more sparsely and finely punctured on the disc.

Helops (Nesotes) tuberculipennis, Luc.*

Gibraltar; a few specimens. Rather commonly at Tetuan and Tangier. In some of the Gibraltar examples the upper surface is of a more shining and more bronzy tint than in those from Marocco, others again are very dull black; the punctures of the elytral striæ are also coarser in some specimens than in others. One example, from Tetuan, has the thorax much less transverse than usual; the elytra in all exhibit the characteristic tuberculate apical interstices. An addition to the European list.

CISTELIDÆ.

Isomira ovulum, Kies.* (*acuminata*, Fairm.).

Gibraltar; Rock, &c., not uncommon; chiefly on the blossom of *Chamærops*. Previously recorded from Gibraltar by Crotch (*Petites Nouv. Ent.*, i., p. 49) under the name of *I. acuminipennis*, and by v. Heyden (*Berl. ent. Zeitschr.*, 1870, Beih., p. 144). *I. acuminata*, Fairm., from Tangier, Marocco (specimens of which are before me), is, no doubt, synonymous with *I. ovulum*.

Isomira murina, Linn.

Gibraltar; by sweeping near San Roque; scarce. These examples have the thorax fusco-ferruginous.

Omophlus ruficollis, Fabr.

Gibraltar and Malaga; on flowers in spring and early summer; abundant.

Omophlus abdominalis, Lap.

Benzús Bay and Tangier, Marocco; not uncommon.

Omophlus rufiventris, Waltl.

Gibraltar; chiefly on thistles, early summer; common. Apparently replaces *O. abdominalis* on the European

side of the Straits; the latter, however, is recorded from Spain.

LAGRIIDÆ.

Lagria viridipennis, Fabr.

Tetuan, Marocco; abundant. This species seems to be restricted to the African side of the Straits.

Lagria Grenieri (Bris.), Kies.*

Gibraltar; Rock, on walls, &c., and on the wing; not rare. Kiesenwetter's description of *L. Grenieri*, Bris. (Berl. ent. Zeitschr., 1870, Beih., p. 145), agrees with these specimens. A single male example collected by Mr. Walker at Malaga, apparently a variety of the same species, has the thorax broader, and the elytra less coarsely wrinkled.

Lagria hirta, Linn.

Gibraltar; scarce.

Lagria lata, Fabr.

Gibraltar; one male example only. This has the antennæ much less elongate than in the same sex of *L. Grenieri*, and the thorax almost smooth.

PEDILIDÆ.

Scraptia dubia, Oliv. (*fusca*, Latr.).

Gibraltar; on the Rock, and also near Algeciras; a few specimens by sweeping.

Scraptia fuscata, Müll. (*minuta*, Muls.)*

Gibraltar; under dry bark, cork-woods, May, 1888; one example.

Scraptia ophthalmica, Muls.*

Gibraltar; Rock, &c., not uncommon, on flowers. Also at Tangier. Apparently not hitherto recorded from Spain. Mulsant gives France; Reitter (Deutsche ent. Zeitschr., 1889, p. 268), Corsica and Sicily. The head of this species is figured by Reitter (Wien. ent. Zeit., 1883, t. 4, fig. 5).

XYLOPHILIDÆ.

Xylophilus boleti, Marsh.

Gibraltar; in dead sticks, &c., on the Rock; scarce.
Also at Tetuan.

Xylophilus nigripennis, Villa (*neglectus*, Duv.).

Tetuan, Marocco; one example, apparently belonging
to this species.

Xylophilus sanguinolentus, Kies.*

Malaga; two examples, one of each sex.

PYTHIDÆ.

Rhinosimus planirostris, Fabr.*

Gibraltar; one specimen, Linea.

ANTHICIDÆ.

Notoxus monoceros, Linn.*

Gibraltar; Campo, &c.; chiefly on the wing.

Notoxus cornutus, Fabr.

Gibraltar; on sallow bushes, first pine-wood, July,
1888; not rare.

Formicomus pedestris, Rossi.

Gibraltar; in tufts of grass, flood refuse, &c.; not
rare. Also at Tetuan and Tangier.

Formicomus canaliculatus, La Ferté.

Tetuan and Tangier; not rare. Recorded from
Europe.

Amblyderus scabricollis, La Ferté.

Tetuan; two examples only. Not met with on the
European side, but recorded from Spain.

Tomoderus compressicollis, Motsch.

Tetuan; many examples. Recorded from Europe.

Anthicus Rodriguesi, Latr.

Gibraltar; in tufts of grass, Campo Common, &c.; not rare. Also at Tangier and Tetuan.

Anthicus antherinus, Linn.

Gibraltar; in tufts of grass, on walls, &c.; common.

Anthicus quadriguttatus, Rossi.

Gibraltar; neutral ground, Campo, &c.; common. Also at Tangier and Tetuan.

Anthicus hispidus, Rossi.

Gibraltar; in company (as usual) with the preceding, but much less common.

Anthicus instabilis, Schmidt.

Gibraltar; in flood refuse, &c.; common. Also at Tetuan and Tangier.

Anthicus Ghiliani, La Ferté.

Gibraltar; rare. Five examples only.

Anthicus humilis, Germ.

Gibraltar; in flood refuse, &c.; common. Also at Tetuan, Ceuta, and Tangier, Morocco.

Anthicus minutus, La Ferté.

Gibraltar; in tufts, on walls, &c. Also at Tetuan.

Anthicus blandulus, Baudi.*

Gibraltar; a few examples. Also at Tetuan. These differ from *A. minutus* (of which it is treated as a variety by Marseul) in the closely punctured head, thus agreeing with Reitter's remarks (*cf.* Wien. ent. Zeit., 1884, p. 144).

Anthicus fenestratus, Schmidt.

Gibraltar; at roots of herbage, sandy places, Linea, &c. Also at Tangier.

Anthicus floralis, Fabr.

Gibraltar; on walls, &c. Also at Tangier.

Anthicus Brucki, Kies.*

Gibraltar; on yellow flowers, Rock, early summer; not uncommon. Only recorded as yet from Gibraltar (Kies., Berl. ent. Zeitschr., 1870, Beih., p. 147; Mars., Monogr. des Anthic. de l'Ancien Monde, L'Abeille, xvii., p. 133).

Anthicus tenellus, La Ferté.

Tetuan; a few examples. Occurs in Europe.

Anthicus tristis, Schmidt.*

Gibraltar; at roots of herbage in sandy places, on walls, &c.; common. Also at Tetuan.

Anthicus olivaceus, La Ferté.

Gibraltar; chiefly found on flowers; not uncommon.

Anthicus Genei, La Ferté.*

Gibraltar; one specimen, Campo beach, in flood rubbish.

Ochthenomus unifasciatus, Bon.

Gibraltar; in flood refuse, occasional. Also at Tetuan.

Ochthenomus tenuicollis, Rossi.

Gibraltar; in tufts of grass, &c.; rather common. Also at Tetuan.

MORDELLIDÆ.

Mordella sulcicauda, Muls.*

Gibraltar; on umbels, &c., early summer; common. Perhaps the *M. fasciata* of Rosenhauer.

Mordella bipunctata, Germ.*

Gibraltar; on umbels, &c., near San Roque; a few specimens. Also at Benzús Bay, Marocco.

Stenalia testacea, Fabr. (*brunneipennis*, Muls.).
Gibraltar ; on umbels, first pine-wood ; common.

Mordellistena brunnea, Fabr.*
Gibraltar ; on *Cistus* flowers, first pine-wood ; rare.

Mordellistena parvula, Gyll.*
Gibraltar ; on flowers, &c., on the Rock.

Mordellistena micans, Germ. (*grisca*, Muls.).
Gibraltar ; on umbels, &c. ; a few specimens. Also
at Benzús Bay, Marocco.

Mordellistena pumila, Gyll.
Gibraltar ; on flowers, in the spring. Also at Tangier.

Mordellistena stenidea, Muls.*
Gibraltar ; on flowers, &c. ; not rare. Also at Tetuan.

Anaspis ruficollis, Fabr.*
Gibraltar ; on flowers, common.

Anaspis pulicaria, Costa.*
Gibraltar ; on flowers, common. Also at Tangier.

Anaspis subtestacea, Steph.*
Tetuan. One example.

Anaspis (Larisia) Chevrolati, Muls.*
Gibraltar ; cork-woods, on dead timber ; also on the
Rock, on umbels. These specimens are apparently
referable to *A. Chevrolati*, Muls., as defined by Emery.
Also at Benzús Bay and Tetuan.

Anaspis (Nassipa) labiata, Costa.*
Gibraltar ; on clover flowers, &c., Campo.

Anaspis (Silaria) quadrimaculata, Gyll.

Gibraltar ; on umbels, &c., on the Rock, June ; common. Also at Tetuan ; one example. In the specimens from Gibraltar the thorax is black ; in the one from Tetuan it is reddish testaceous.

RHIPIPHORIDÆ.

Evaniocera Dufouri, Latr.*

Gibraltar ; one male example, captured on the wing in the cork-woods, May, 1888.

Emenadia præusta, Gebl.*

Gibraltar ; Campo, one female specimen only, taken from a flower.

Emenadia flabellata, Fabr.*

Gibraltar ; one male example, cork-woods.

MELOIDÆ.

Meloe tuccius, Rossi.

Gibraltar ; on paths, occasional.

Meloe purpurascens, Germ.*

Gibraltar ; on paths, &c., chiefly in winter ; rare.

Meloe majalis, Linn.

Gibraltar ; Campo Common, &c., in the spring ; abundant.

Meloe murinus, Brandt.

Tangier ; one example.

Meloe rugosus, Marsh.

Gibraltar ; occasionally under stones, in winter. Also at Tetuan.

Meloe baudueri, Gren.*

Gibraltar ; one example. According to Abeille de Perrin (Bull. Soc. Toulouse, 1880, p. 235), this species is widely distributed in the Mediterranean basin.

Meloe autumnalis, Oliv.

Djebel Mousa (Apes' Hill), Marocco; one example. A well-known European species.

Meloe violaceus, Marsh.

Tangier; a few examples.

Mylabris oleæ, Cast.

Tetuan and Tangier, Marocco. Apparently not recorded from Europe.

Mylabris variabilis, Pall.

Tetuan and Tangier, Marocco. A well-known European species.

Mylabris quadripunctata, Linn.

Gibraltar; on flowers, &c., chiefly in the cork-woods in early summer; common.

Mylabris hieracii, Graells (*suspiciosa*, Rosenh.).

Gibraltar; with the preceding.

Coryna billbergi, Gyll.

Gibraltar; with the preceding. In some specimens the two spots nearest the suture are obliterated.

Enas fusicornis, Abeille de Perrin ($\sigma = \text{afer}$, Duv.,
nec Linn.; $\text{♀} = \text{hispanus}$, Ab. de Per.).*

Gibraltar; near Algeciras and in first pine-wood, on umbels, numerous examples, including both sexes. The male agrees with Abeille de Perrin's description of *E. fusicornis*, and the female with his *E. hispanus*; the latter was described from a single female example, the former from the male sex only!

Enas afer, Linn. (nec Duv.).

Benzús Bay, Marocco; a few specimens, including both sexes. They agree with Abeille de Perrin's de-

inition of this species (Bull. Soc. Toulouse, 1880, pp. 241, 243). Some examples collected at Tangier perhaps belong here (or to *Æ. sericea*, Oliv.); four of them have the thorax pitchy black, instead of rufous.

Lagorina sericea, Pall.

Gibraltar; occasionally found by sweeping, &c. Also at Tangier.

Zonitis præusta, Fabr.*

Gibraltar; Campo Common, &c., on flowers; not rare.

Zonitis mutica, Seriba.

Gibraltar; not uncommon.

Lydus algericus, Latr.

Benzús Bay, Marocco. Recorded from Europe.

ÆDEMERIDÆ.

Asclera xanthoderes, Muls.*

Gibraltar; on *Cistus* flowers, cork-woods, three examples, March, 1888. Recorded by Mulsant from France and Sicily.

Nacerdes melanura, Linn.*

Gibraltar; on the wing at Linea and elsewhere.

Oncomera marmorata, Er.*

Gibraltar; one example flying in the Alameda at dusk, June, 1887, and two others subsequently. An addition to the European list.

Ædemera barbara, Fabr.

Gibraltar; on flowers, common, in spring.

Ædemera lurida, Marsh.

Gibraltar; on flowers, first pine-wood.

Ædemera unicolor, Schmidt.

Gibraltar; on flowers, in the spring; one female specimen only.

Ædemera simplex, Linn. (*flavimana*, Schmidt).*

Gibraltar; on flowers, &c.; not rare. Also at Malaga. This is probably Rosenhauer's *Æ. flavipennis*. It also occurs in Marocco.

Stenostoma cæruleum, Pet. (*rostratum*, Fabr.).

Tetuan, Marocco; plentifully in the marshy ground at Esmir. Recorded from Spain.